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July 22, 2022

VIA CM/ECF

Hon. Therese Wiley Dancks
Federal Building and U.S. Courthouse
P.O. Box 7346
Syracuse NY 13261-7346

> **RE:** *Rensselaer Polytechnic Institute et al. v. Amazon.com, Inc.*
> **Case No. 1:18-cv-00549**

Dear Judge Dancks:

Amazon respectfully requests a conference to address a motion to compel depositions of three professors employed by Plaintiff Rensselaer Polytechnic Institute ("RPI"). These RPI professors have unique, first-hand knowledge that is highly relevant to a case-dispositive issue—the invalidity of the asserted patent claims.

The asserted '798 patent purports to disclose a major advance in the field of "natural language processing." But the RPI professors, who specialize in this field, have each made statements in their publications that cast doubt on the viability of the patented invention. The professors' publications suggest that nobody—including the patent's inventors—has yet achieved the type of results that the patent promised two decades ago. Amazon seeks testimony about the factual basis for the RPI professors' published statements. This testimony strikes at the heart of the patent's validity.

I. The Court Should Compel The RPI Professors' Depositions.

As the Court recently explained, "'[t]he party seeking discovery bears the initial burden of proving the discovery is relevant, and then the party withholding discovery on the grounds of burden, expense, privilege, or work product bears the burden of proving the discovery is in fact privileged or work product, unduly burdensome and/or expensive.' *OnActuate Consulting Inc. v. Aeon Nexus Corp.*, 20-CV-0508, 2022 WL 866418, at *1 (N.D.N.Y. Mar. 23, 2022)." (Dkt. No. 205 at 10.) Here, the discovery Amazon seeks is highly relevant, and Plaintiffs identify no privilege or evidence of undue burden to justify withholding it.

A.   The '798 Patent Purports to Disclose a Major Advance in Natural Language Processing.

The asserted patent aspires to provide a "*truly natural*" capability for a computer to understand a person's natural-language questions, whereby the computer "interprets *any style of articulation*" the

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person may choose to express the question. (Dkt. No. 1-1 ("'798 patent") at 6:35-40, 4:56-58.)[1] The patent describes its "truly natural" processing as fundamentally different from previous approaches, which required "using only some well-structured sentence templates and a tightly controlled vocabulary set[.]" (*Id.* at 4:52-65.) RPI emphasized this truly natural capability in its arguments to the Patent Office, claiming that the invention allowed computers to interpret *all* human language, with no constraints on how users express their queries:

> By contrast [to prior approaches], the present invention allows the natural language queries (input) to be constructed in *any way* a human user might chose to do… There is *no right way* or good way *or limitations* for the user to learn to use the system.

(Dkt. No. 142-5 at RPI_CF006970.)

The asserted patent recognizes how groundbreaking such an invention would be, explaining that "decades of hard work by some of the brightest minds in the Artificial Intelligence field has proven the understanding of speech one of the most evasive information technology goals." ('798 patent at 1:34-37.) Plaintiffs' complaint repeats this same language, alleging that the inventors solved "*one of the most evasive goals in information technology*." (Dkt. No. 1 at ¶¶ 36-41.) According to Plaintiffs, the patent "represents decades of innovation and investment by RPI" and discloses a "*pioneering invention*." (Dkt. No. 143 at 2.) Plaintiffs allege that before the patent, natural-language processing systems were "inaccurate," "unreliable," and "could not assure successful outputs to users' natural language queries." (*Id.* at 2-3.) But the inventors supposedly designed a "drastically improved" system that solved all of these problems. (*Id.*)

B.   The Professors' Publications and Personal Knowledge Are Relevant to Invalidity.

The RPI professors' testimony about their publications and their personal experience with natural language processing research will be relevant to show whether the inventors ever achieved the results that their patent promised. If their fellow professor at RPI had actually invented and disclosed a truly "pioneering" invention that "drastically improved" natural language processing technology, then these three RPI professors who specialize in that technology and have been researching it for decades would presumably be well aware of their colleague's achievement and would so testify. Conversely, if the three RPI professors testify—consistent with their printed publications—that the capabilities the patent purported to teach have not materialized, this would be relevant to show that the patent is flawed.

The following are examples of publications suggesting the patent never delivered on its promise of a "truly natural" system that understands questions from humans regardless of how they are phrased:

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[1] Emphasis in quotations is added unless otherwise noted.

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S. Nirenburg & V. Raskin, Ontological Semantics *xiv* (2004) ("It is arguable that the human level of performance in processing language is a goal that is unattainable by computer programs, either today or, quite possibly, ever.")

T. Strzalkowski & S. Harabagiu (eds.), Advances in Open-Domain Question Answering *xvi* (2006) ("None of these [existing question-answering] technologies are anywhere near matching human linguistic capabilities")

M. McShane & S. Nirenburg, Linguistics for the Age of AI (2021) ("The movie [2001: A Space Odyssey] came out over fifty years ago, so one might expect HAL [the 'sentient computer'] to be a reality by now, like smartphones. But nothing could be further from the truth.").

These publications from the three RPI professors post-date the filing and publication of the '798 patent by several years. (*See* '798 patent at 1 (filed in 2001 and published in 2002).) If the patent's allegedly pioneering invention had worked—giving computers the ability to understand all human language—then the limitations that the professors described in their publications presumably would not exist.

Testimony suggesting here that the alleged invention never achieved its goals would be relevant to show that the patent claims are invalid for lack of enablement under 35 U.S.C. § 112. A patent that claims radically improved results, but never teaches a person of skill in the art how to achieve those results is not enabled, and thus invalid. The Federal Circuit's decision in *MagSil Corp. v. Hitachi Global Storage Technologies, Inc.*, 687 F.3d 1377 (Fed. Cir. 2012), shows this.

In *MagSil*, the Federal Circuit affirmed a district court decision holding a patent invalid on summary judgment for lack of enablement. 687 F.3d at 1378. The patent at issue was owned by Massachusetts Institute of Technology and exclusively licensed to MagSil. *Id.* It was directed to technology for computer hard disk storage systems. *Id.* This technology was used to control the electrical resistance of a "tunnel junction," which is part of a disk. *Id.* At the time the patent application was filed, the inventors had produced tunnel junctions with resistance changes up to 11.8%. *Id.* But they sought patent claims that would cover far higher changes—up to 1000% or more. *Id.* at 1381.

Testimony obtained during the litigation confirmed that the inventors never achieved what their patent claimed. A year after they filed their patent application, the inventors had achieved less than a 20% change in resistance. *Id.* at 1382. And more than a decade after the filing, the best that *anybody* in the field—not just the inventors—had achieved was a 604% change. *Id.* Based on this post-filing evidence, the Federal Circuit held that the patent failed to enable the higher level of resistance changes that it claimed. *Id.*

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Here, the RPI professors' testimony regarding their publications and observations after the patent's filing may show that nobody has ever achieved the results claimed in the '798 patent. As *MagSil* demonstrates, such testimony would be highly relevant to whether the patent claims are invalid.

The RPI professors' personal experience *before* the patent's filing is also relevant. The question of enablement depends on factors such as "the state of the prior art," "the relative skill of those in the art," and "the predictability or unpredictability of the art," among others. *Amgen Inc. v. Sanofi, Aventisub LLC*, 987 F.3d 1080, 1084 (Fed. Cir. 2021) (quoting *In re Wands*, 858 F.2d 731, 736–37 (Fed. Cir. 1988)). Because each of the three professors worked in the field of natural language processing before the patent's 2001 priority date, they have factual knowledge that is relevant to each of these enablement factors.[2]

C.   The Professors' Personal Knowledge Is Relevant To Damages.

The professors' testimony also will be relevant to the proper amount of any damages award. For example, if the professors' testimony establishes—consistent with their printed publications—that the patent's promised capabilities never fully materialized, such testimony would suggest that the amount of any damages award should be minimal.

The professors' testimony also will shed light on other facts that inform the damages analysis. Specifically, patent damages may be measured by a "reasonable royalty." 35 U.S.C. § 284. The reasonable royalty may be based on a "hypothetical negotiation" between a willing licensor and willing licensee. *E.g.*, *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 435 F.3d 1356, 1361 (Fed. Cir. 2006). The time of the hypothetical negotiation is "the time that infringement began." *Id.* This hypothetical negotiation must account for any "non-infringing alternatives," which are technologies that could be used in place of the alleged invention. *Riles v. Shell Expl. & Prod. Co.*, 298 F.3d 1302, 1312 (Fed. Cir. 2002). Here, Amazon launched its first accused product in 2014—more than a decade after all three professors began working on natural language processing and a year after Professors Nirenburg and McShane started at RPI. By this time, the professors would have been aware of many alternatives to the '798 patent. The professors' factual knowledge concerning these non-infringing alternatives available in 2014 is relevant to the hypothetical negotiation, and they should testify about these facts. *See Phillip M. Adams & Assocs., Ltd. Liab. Co. v. Winbond Elecs. Corp.*, No. 1:05-CV-64, 2010 U.S. Dist. LEXIS 95969, at *14-15 (D. Utah Sep. 14, 2010) (allowing testimony about *facts* relating to damages, as distinct from expert opinion).

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[2] Professor Nirenburg has worked in "natural language processing (NLP) for over 30 years." (Ex. 1 at 1.) Strzalkowski was a "Natural Language Group Leader" at GE (Ex. 2 at 1) from 1994 to 2000 (Ex. 3). And McShane was a "Senior Computational Linguist" at a "Computing Research Laboratory" from 2000 to 2002. (Ex. 4 at 1.)

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II. Plaintiffs Cannot Justify Withholding The Professors' Testimony.

A. Plaintiffs Fail to Rebut Amazon's Showing of Relevance.

Plaintiffs argue that the three RPI professors have no relevant knowledge because they did not work at RPI at time of the invention (in 2001). (Ex. 8 at 1.) This argument fails for two reasons. First, the professors' knowledge acquired *after* the time of the alleged invention is relevant to both enablement and damages as explained above. Second, the professors were working in the field of natural language processing before the alleged invention, even though they were not at RPI. Their knowledge of the field *before* their arrival at RPI is relevant to enablement and damages, as also explained above.

The Federal Circuit has rejected Plaintiffs' view that facts arising after an alleged invention are irrelevant. For example, in *Amgen Inc. v. Sanofi*, 872 F.3d 1367, 1375 (Fed. Cir. 2017), an accused infringer "sought to introduce *post-priority-date* [i.e., post-invention] evidence showing that [the patentees] engaged in lengthy and potentially undue experimentation to enable the full scope of the claims."[3] The district court erroneously excluded this evidence. *Id.* The Federal Circuit reversed and remanded for a new trial because "[s]uch evidence could have been relevant to determining if the claims were enabled as of the priority date and should not have been excluded simply because it post-dated the claims' priority date." *Id.* Likewise here, the RPI professors' testimony about whether anybody ever accomplished the patent's goal—even fifteen or twenty years after the patent was filed—will be relevant to show whether the patent claims were fully enabled. *See MagSil*, 687 F.3d at 1380-83 (relying on testimony about research conducted a year after, and more than a decade after, the patent's filing to hold the patent invalid); *see also ALZA Corp. v. Andrx Pharms., LLC*, 603 F.3d 935, 938-442 (Fed. Cir. 2010) (holding patent claims invalid where patentee's employees testified that "despite its efforts, the [patentee] had been unable to develop" all of what the patent claimed).

Plaintiffs argue also that the professors lack relevant knowledge because they work in RPI's "Cognitive Science" department rather than its Engineering school. (Ex. 8 at 1.) But RPI admits on its web site that the work of this department includes "computer science," and the department specifically purports to "create artificially intelligent computers." (Ex. 5 at 1.) Thus, the department distinction is plainly irrelevant. And, each of the professors undisputedly specializes in natural language processing— the very field to which the '798 patent relates.

Plaintiffs argue also that Professor McShane lacks relevant information because she earned her Ph.D. in "Slavic Languages." (Ex. 8 at 1.) But Professor McShane became a Professor of *Computer Science and Electrical Engineering* in 2002, before joining RPI in 2013. (Ex. 4 at 1.) She has admittedly

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[3] A "priority date" is the filing date of the first patent application that discloses an invention.

"devoted particular attention" to "natural language processing" throughout her career—researching and publishing extensively in this area. (Ex. 7 at 1.) Thus, Plaintiffs' argument is meritless.

B.   Plaintiffs' 30(b)(6) Designee Is Not an Adequate Substitute for the Professors.

Plaintiffs argue that Amazon should not depose the professors because whatever information Amazon seeks from them can be obtained from Plaintiffs' 30(b)(6) designee. (Ex. 8 at 2.) This argument fails because Rule 30(b)(6) expressly states that it "does not preclude a deposition by any other procedure" available under the Federal Rules of Civil Procedure. "Courts have rejected the argument that a Rule 30(b)(6) deposition and a percipient witness deposition are unnecessary or cumulative of one another based on the similarity of topics covered." *Nationstar Mortg., LLC v. Flamingo Trails No. 7 Landscape Maint. Ass'n*, 316 F.R.D. 327, 333-34 (D. Nev. 2016); *see also Doe v. Trump*, 329 F.R.D. 262, 273-74 (W.D. Wash. 2018) (rejecting "the notion that taking a 30(b)(6) deposition is necessarily duplicative" of other witness testimony and holding that a party is "entitled to seek both types of discovery … even if they address similar or overlapping subject matters").

Because the RPI professors have first-hand knowledge of the relevant facts, including the basis for the statements in their printed publications, Amazon is entitled to examine them directly. *See Hay & Forage Indus. v. Ford New Holland, Inc.*, 132 F.R.D. 687, 690 (D. Kan. 1990) ("Plaintiff has not shown that [its suggested witness] would be a better source than the person with *first-hand knowledge* about the [facts supporting an alleged defense]"). Amazon's need to examine the professors directly is particularly acute because Plaintiffs' proposed 30(b)(6) designee has strong financial incentives to give self-serving testimony. Plaintiffs intend to designate one of the patent's named inventors, Cheng Hsu (Ex. 6 at 3), who personally stands to receive millions of dollars if Plaintiffs prevail.[4] Amazon should be permitted to test and rebut Dr. Hsu's biased testimony with the testimony of the RPI professors who have more direct knowledge of certain facts Amazon is seeking, and less financial incentive to undermine those facts.

Even if the RPI professors' testimony overlapped with some other source of evidence, such overlap would not justify Plaintiffs' attempts to withhold this highly relevant evidence. It is well established that "repetition of testimony may be essential with respect to witnesses whose credibility may determine the dispute's outcome." *E.g.*, *Williams v. Bell*, 587 F.2d 1240, 1248 (D.C. Cir. 1978); *U.S. v. Ray*, No. 20-CR-110 (LJL), 2022 WL 101911, at *15 (S.D.N.Y. Jan. 11, 2022) ("This testimony may be probative in that it may *corroborate*" the testimony of certain witnesses … but that does not make it "'needlessly

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[4] In a prior case involving the '798 patent, Dr. Hsu personally received $871,500 as his share of the settlement RPI collected. (*See* Ex. 9 (RPI's IRS Form 990) at 8.) Here, RPI likely will seek much more than it obtained in that prior case, so Hsu may anticipate that his recovery could be millions of dollars, and be biased accordingly.

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cumulative.'").[5] Here, the professors' credibility may determine the outcome of Amazon's invalidity challenge.

C.   The Professors' Technical Expertise Does Not Entitle RPI to Withhold Their Testimony.

Plaintiffs argue that the professors should not be deposed because the testimony Amazon seeks from them would implicate their specialized technical expertise. (Ex. 8 at 1.) But the Second Circuit held in *Kaufman v. Edelstein*, 539 F.2d 811, 821 (2d Cir. 1976), that there is "no justification for a federal rule that would wholly exempt experts from placing before a tribunal factual knowledge relating to the case in hand" or "opinions already formulated." Thus, no privilege prevents the depositions that Amazon seeks.[6]

Under *Kaufman*, a court deciding whether to compel testimony from a witness with specialized expertise should consider the following factors: (1) "the degree to which the expert is being called because of his knowledge of facts relevant to the case rather than in order to give opinion testimony;" (2) "the difference between testifying to a previously formed or expressed opinion and forming a new one;" (3) "the possibility that, for other reasons, the witness is a unique expert;" (4) "the extent to which the calling party is able to show the unlikelihood that any comparable witness will willingly testify;" and (5) "the degree to which the witness is able to show that he has been oppressed by having continually to testify." 539 F.2d at 822. Here, none of these factors supports Plaintiffs' attempt to withhold the professors' testimony.

First, although the three RPI professors have specialized technical expertise, Amazon is not seeking to elicit any expert opinion from them about the asserted patent. Rather, Amazon seeks their testimony about the pertinent *facts*. *See ABS Glob., Inc. v. Inguran, LLC*, No. 14-CV-503-WMC, 2019 WL 3812520, at *19 (W.D. Wis. Aug. 14, 2019) (testimony about difficulties encountered in implementing a patented invention, offered to show lack of enablement, was "permissible fact testimony," not expert testimony). Amazon is entitled to the professors' testimony about these facts. *See KinectUs LLC v. Bumble Trading LLC*, No. CV 21-MC-91665-ADB, 2021 WL 6066539, at *3 (D. Mass. Dec. 22,

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[5] *See also, e.g., English v. Romanowski*, 602 F.3d 714, 727 (6th Cir.2010) ("Undoubtedly, the testimony of a second person to corroborate the Defendant's version of the events would not have been cumulative, but rather could have critically added to the strength of the defense's case."); *United States v. Miller*, 546 F. App'x 709, 710 (9th Cir. 2013) ("corroborating testimony is not cumulative when it bolsters the defendant's contested version of the facts").

[6] Fed. R. Civ. P. 45(d)(3)(B)(ii) gives courts discretion to quash subpoenas directed to unretained experts in limited circumstances, but this rule does not apply here for two reasons. First, the professors are undisputedly party witnesses whose depositions Amazon seeks to take by notice, not subpoena. Second, neither of the criteria the Rule identifies for quashing such subpoenas is satisfied here.

2021) ("Inquiries into the *factual bases* for Professor Schmandt's prior statements do not amount to an unretained expert opinion"). Indeed, the Second Circuit has specifically noted that evidence about "the development of techniques" in a field and "the stage they had reached" is often "important to the just determination of disputes" and parties should be able to obtain discovery about such facts. *Kaufman*, 539 F.2d at 821. This is precisely the sort of testimony that Amazon seeks here.

Second, even if some of the information that Amazon seeks—e.g., relating to statements in the professors' publications—could be characterized as expert opinion rather than facts, Plaintiffs would not be entitled to withhold it. "The opinions at issue are *already formed opinions*—they are not being asked to create new opinions … unrelated to their work." *Nat. Res. Def. Council v. Zinke*, No. 1:05–cv–01207, 2018 WL 1899609, at *10 (E.D. Cal. Apr. 20, 2018). *See also Brogren v. Pohlad*, No. 94 C 6301, 1994 WL 654917, at *2 (N.D. Ill. Nov. 14, 1994) ("to the extent that [plaintiffs' subpoenas] seek Read's opinions, they seek opinions that Read has previously formed and expressed").

Third, the professors' testimony is unique. Plaintiffs argued that the information Amazon seeks from the professors should be obtained from Amazon's own technical expert, but this is not possible. Amazon has no technical expert with knowledge of the facts at issue. For example, Amazon's expert cannot be expected to authenticate the RPI professors' own publications, explain the factual basis for the statements in those publications, or describe the challenges that these professors faced in their research efforts at RPI. *See Nat. Res. Def. Council*, 2018 WL 1899609, at *10 ("No other witness understands the basis for their previously formed opinions and facts gathered in preparing those opinions"). These facts are unique to the professors' own research and experience. Thus, the testimony Amazon seeks from the professors cannot be obtained from Amazon's own expert.

But even if some of the information that Amazon seeks could potentially be obtained from other witnesses, this possibility would not entitle Plaintiffs to withhold the professors' relevant knowledge. *Kaufman*, 539 F.2d at 818 (If the party seeking testimony "has some reason to think [a certain accountant and certain consultant] will give testimony on this subject considered favorable to its position, we see no reason why it must go down the list of great accounting and consulting firms until it finds one … that presents the combination of willingness to furnish a qualified expert and the helpfulness of his testimony which the [party] evidently thinks it has found in Dr. Kaufman and Mr. Withington."). *See also In re Cary*, 167 B.R. 163, 167 (Bankr. W.D. Mo. 1994) ("there is no affirmative duty upon the subpoenaing party to exhaust a list of all possible experts similarly qualified to find a willing expert where the subpoenaing party has already found a competent witness in the subpoenaed expert").

Fourth, Amazon is not aware of any comparable witness that would be willing to testify. Plaintiffs have identified named inventor Cheng Hsu as a substitute, but he has a strong financial incentive to give self-serving testimony and lacks first-hand knowledge of important facts, as explained above, particularly regarding the professors' publications. Thus, he is not a comparable witness.

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Fifth, nothing suggests that any of the three RPI professors have ever been burdened by continually having to testify in lawsuits. Although Plaintiffs argue that the professors would somehow be burdened by having to testify in this single lawsuit, Plaintiffs refuse to provide any details—let alone evidence—supporting the alleged burden. (Ex. 6 at 3, 2, 1.) Thus, the Court should not allow Plaintiffs to withhold the professors' testimony.

III. <u>Conclusion</u>

For the foregoing reasons, Amazon requests a conference to discuss its proposed motion to compel depositions of the three RPI professors.

Respectfully submitted,

<u>s/ Jeremy A. Anapol</u>

KNOBBE, MARTENS, OLSON & BEAR, LLP
Counsel for Defendant
AMAZON.COM, INC.

cc: All counsel of record by ECF

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<u>CERTIFICATE OF SERVICE</u>

I hereby certify that on July 22, 2022, I caused this Letter to be filed with the Clerk of the District Court using the CM/ECF system, which provided electronic notification of such filing to all counsel of record.

s/ Jeremy A. Anapol